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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,217	06/27/2003	Takashi Imanishi	Q76309	5687
65565 7590 04/18/2008 SUGHRUE-265550 2100 PENNSYLVANIA AVE. NW WASHINGTON, DC 20037-3213				
EXAMINER				
JOYCE, WILLIAM C				
ART UNIT		PAPER NUMBER		
3682				
MAIL DATE		DELIVERY MODE		
04/18/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/607,217

Applicant(s)

IMANISHI ET AL.

Examiner

William C. Joyce

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 and 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This Office Action is in response to the amendment filed January 11, 2008 for the above identified patent application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over at least one of Yamamoto (USP 6,203,467) or Imanishi (USP 6,746,364) in view of Bauer et al. (USP 5,382,099).

Yamamoto et al. illustrates a toroidal continuously variable transmission (CVT), comprising: a pair of input and output disks (17-20) each including a first traction surface; power rollers (70-71) each including a second traction surface and respectively interposed between the first traction surfaces of the input and output disks; an oil passage (for example, 105,107,113) for guiding lubricating oil to the traction surfaces of the power rollers, input disk and output disk. Referring to Figure 6, Yamamoto et al. illustrates the displacement shafts (147) having an oil passage (not referenced) and oil holes (not referenced) for supplying lubricant to the power roller bearings (71A). Applicant's attention is drawn to Figure 6 of Imanishi which clearly

discloses the use of oil passages in a CVT displacement shaft for providing oil to bearings.

Imanishi discloses a CVT having displacement shafts (28) with an oil passage (73) and oil holes (73a,73b) for supplying lubricant to the power roller bearings (31,32).

Neither Yamamoto et al. nor Imanishi teach a line filter disposed in the oil passage, however it was notoriously known in the art to provide a line filter at an oil sump in a transmission for filtering the transmission oil. Official Notice is taken with respect to providing a line filter in either of the transmissions of Yamamoto et al. or Imanishi since it was notoriously known in the art.

Neither Yamamoto et al. nor Imanishi teach a filter disposed on the exit side of the displacement shaft oil passage, but it was known in the gearing art to provide an in-line oil filter at an exit side of an oil passage for preventing contaminants from reaching a bearing.

The prior art to Bauer et al. teaches a bearing oil filter arrangement comprising: an oil passage (23) for supplying oil to a bearing (2), a filter (30) disposed in an exit side of the oil passage.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the oil passage arrangement of either one of Yamamoto et al. or Imanishi with an in-line oil filter at the exit side thereof, as taught by Bauer et al., motivation being to prevent contaminants from entering the bearing arrangement. With respect to making the bearing filter a rougher mesh than the line filter, the prior art references do not specifically describe the mesh size of the filters. It would have

been obvious to one in the art at the time the invention was made to adjust the size of the line filters inherently found in either transmission of Yamamoto et al. or Imanishi to provide a specific quality of fluid being supplied throughout the transmission. Further, adjusting the relative mesh size of the filters so the line filter is a finer mesh than the bearing filter would have been within the skill of one in the art to trap a specific size of wear particles that may be introduced into the oil passages after the line filter thereby ensuring a specific quality of oil to the bearing. Further, adjusting the mesh size of the filters is considered an obvious design choice and does not provide an unexpected result.

Response to Arguments

3. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues to achieve the purpose of ensuring a specific quality of oil to the bearing, a finer filter would have to be disposed on the downstream side with respect to the traction surface, but the claims define the finer line filter being disposed upstream of the filter with respect to the traction surface. This argument is not persuasive because one of ordinary skill in the art would recognize that the finer mesh filter *is not required* to be located at a downstream location with respect to the traction surface. For example, one in the art would recognize the possibility of contaminants being introduced into the transmission oil passage during assembly of the transmission. In a second example, one in

the art would recognize that contaminants may be introduced into the transmission oil passage in the event of a malfunctioning, defective, or worn hydraulic component that is located between the two filter arrangements. Accordingly, adjusting the relative mesh size of the filters so the line filter is a finer mesh than the bearing filter would have been within the skill of one in the art to trap a specific size of wear particles that may be introduced into the oil passages after the line filter thereby ensuring a specific quality of oil to the bearing.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (571) 272-7107. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William C. Joyce/ 4/14/08
Primary Examiner, Art Unit 3682